

**ADDICTED TO OIL:
RANKING STATES' OIL VULNERABILITY AND SOLUTIONS FOR CHANGE**

NATURAL RESOURCES DEFENSE COUNCIL
JULY 2007

EXECUTIVE SUMMARY

Peak summer driving season is fast approaching, and with it comes the reminder that America's addiction to oil continues to threaten our national security, economic viability, and global environmental health. What we drive, how often we drive, and what fuels we use are at the core of our 21-million-barrel-per-day oil habit. To curb this perilous addiction, we need effective government policies that will increase the availability of efficient vehicles, expand the use of clean fuels, and promote smart growth and public transit alternatives. New NRDC research identifies the states that are most vulnerable to spikes in oil prices—and those states that are doing the most to break their addiction to oil.

This paper ranks U.S. states on two critical areas related to America's continuing addiction to oil. First, their oil vulnerability—that is, how heavily each state's citizens are affected by increases in oil prices. Second, states are ranked on their implementation of solutions to reduce their oil dependence—what measures they are taking to lessen their vulnerability and to bolster America's security. The data yield two clear conclusions:

- Oil dependence affects all states, but some are hit harder economically than others.
- While some states are pioneering solutions, many are taking little or no action. In fact, about one-third of states are not taking any steps to reduce their oil dependence.

What States' Drivers Are Most At Risk?

NRDC research shows that the 10 states with the highest degree of oil vulnerability are:

- Mississippi
- South Carolina
- Georgia
- Kentucky
- New Mexico
- Oklahoma
- Arizona
- Louisiana
- Arkansas
- West Virginia

Our oil vulnerability ranking is based on the average percentage of income that states' drivers spend on gasoline. Generally, the most vulnerable states are in the South and the least vulnerable are in the Northeast. There is significant variation among states: Citizens in the most vulnerable state—Mississippi—spend an average of more than 6 percent of their per capita income on gasoline, while citizens in the least vulnerable state—Connecticut—spend about 2.5 percent of theirs, a 60 percent difference. When oil prices go up, citizens in vulnerable states are hit the hardest.

NRDC will continue to update these rankings in the future, hoping to see a marked reduction in vulnerability rates as states enact policies to reduce oil dependence.

State Action on Oil Dependence: The Best and the Worst

Although some states are implementing strong measures to reduce our nation's oil dependence, too many others are taking little or no action.

NRDC research shows that the 10 states doing the *most* to wean themselves from oil are:

- California
- Washington
- New Jersey
- Rhode Island
- Oregon
- Maine
- New York
- Maryland
- Connecticut
- Massachusetts.

In contrast, the 10 states doing the *least* to reduce their oil dependence are **Wyoming, West Virginia, Mississippi, South Dakota, Nebraska, New Hampshire, Kentucky, Alabama, Texas, and Ohio**. The failure of these states to take meaningful action to reduce oil dependence exacerbates the national security and environmental harms associated with our current transportation habits.

The Benefits of Reducing Oil Dependence

Reducing oil dependence can yield significant benefits for residents of individual states. Economic benefits include lowering the economic vulnerability that many residents will face if oil prices rise dramatically and creating new in-state farm income from the sale of biofuels. Decreasing oil consumption also enhances America's national security by reducing dependence on sources of oil that are politically unstable or controlled by unfriendly national governments. In addition, reduced oil consumption decreases air pollution, including the pollution that causes global warming.

State Policies for Reducing Oil Dependence

In the absence of strong national policies on issues such as oil independence and global warming, states have begun assuming responsibility for creating less oil-intensive transportation habits. Strategies include:

- **Clean cars.** Vehicles that cut global warming pollution also have the benefit of reducing oil consumption considerably. Eleven other states have adopted California's "clean cars" program, which places increasingly stringent limits on global warming pollution from new vehicles. And twelve states – including New Jersey, Kansas, and Oregon – offer incentives for the purchase of new hybrid-electric and plug-in cars and trucks. These states are taking action to increase the number of cleaner, more efficient cars on their roads.
- **Clean fuels.** Biofuels can make a large dent in our oil dependence and greenhouse gas emissions. Seventeen states offer incentives for fueling stations selling biofuels, and seven have a Renewable Fuels Standard requiring a percentage of fuel sold in the state to

be from renewable sources. California stands alone in its intention to have a Low-Carbon Fuel Standard, which seeks to reduce the global warming pollution “intensity” of motor vehicle fuel by 10 percent by 2020. These states are striving to decrease the amount of oil our country needs for its gas tanks.

- **Smart growth and public transit.** By integrating land use and transportation systems and designing them to promote alternatives to driving, states can reduce oil dependence significantly. Ten states, including Hawaii, Georgia, and Maine, have adopted smart growth measures intended to curb sprawl and the associated traffic, commuting, and other vehicle-miles traveled. In addition, some states, led by New York and Maryland, have prioritized the funding of public transit through state funds and/or by transferring portions of their federal highway dollars. These states are working to reduce the need to drive and the amount of oil we need to get around.

As policies to reduce oil dependence take root, states that implement these cutting-edge policies will be making the nation more secure, protecting their citizens’ pocketbooks, and enhancing global environmental health. These states’ policies can serve as examples for the many states that have thus far taken little or no such action.

Confronting the twin challenges of global warming and oil dependence is a tall order. That’s why the federal government must enact strong complementary energy policies. Specifically, policymakers should:

- Adopt higher fuel economy standards for cars and trucks
- Adopt a low-carbon fuel standard
- Boost investments in public transportation and other alternatives to driving

OIL VULNERABILITY RANKINGS: WHO IS HARDEST HIT?

Americans are increasingly concerned about the problem of oil dependence and its consequences. Even President Bush recognized in his 2006 State of the Union address that “America is addicted to oil.”

This addiction creates a host of economic and environmental problems:

- The United States only has three percent of the world’s oil supplies but is responsible for about a quarter of the world’s oil consumption. We currently import 58 percent of our oil from foreign countries, and more and more of the world’s future supply will have to come from regions that are either politically unstable or unfriendly to U.S. interests.¹
- Our unstable supply of oil threatens our national economy, particularly since 97 percent of the U.S. transportation system is completely reliant on oil.²
- Our current oil dependence requires imports that make up 40 percent of the national trade deficit.³
- Oil consumption is a leading contributor to greenhouse gas (GHG) emissions that cause global warming. In the U.S., the oil-based transportation system is responsible for one-third of our global warming pollution.

¹ NRDC, *Treating America’s Oil Addiction: A Clean, Renewable Path to Energy Security*, 2007, http://www.nrdc.org/legislation/factsheets/leg_07011701A.pdf

² *Ibid.*

³ *Ibid.*

Our national addiction to oil affects every American in every state. The rankings in Table 1, however, clearly show that oil dependence hits the citizens of certain states harder than others. These rankings reflect the amount of the average citizen's income spent on motor gasoline last year in each state.⁴

⁴ NRDC determined states' vulnerability to economic impacts by factoring in not only the volume and price of gasoline sold in the state, but also the average income of states' citizens, to reflect the economic impact felt on the average citizen in each state. For more details, see the Methodology section at the end of this report.

TABLE 1: OIL VULNERABILITY RANKINGS

Rank	State	% of Income (and \$ Amount) Spent on Gasoline by the Average Driver, 2006
1	Mississippi	6.34% (\$1675.61)
2	South Carolina	5.60% (\$1645.25)
3	Georgia	5.47% (\$1744.53)
4	Kentucky	5.31% (\$1555.27)
5	New Mexico	5.26% (\$1547.05)
6	Oklahoma	5.07% (\$1620.96)
7	Arizona	4.88% (\$1527.62)
8	Louisiana	4.88% (\$1509.73)
9	Arkansas	4.87% (\$1358.25)
10	West Virginia	4.72% (\$1287.94)
11	Texas	4.71% (\$1601.40)
12	Indiana	4.64% (\$1505.47)
13	Missouri	4.63% (\$1513.92)
14	Alabama	4.63% (\$1440.69)
15	Maine	4.60% (\$1486.32)
16	North Dakota	4.60% (\$1495.33)
17	Iowa	4.59% (\$1531.40)
18	Minnesota	4.57% (\$1766.08)
19	Utah	4.52% (\$1296.22)
20	Tennessee	4.42% (\$1422.64)
21	North Carolina	4.30% (\$1373.48)
22	Montana	4.29% (\$1296.03)
23	South Dakota	4.27% (\$1448.04)
24	Wyoming	4.19% (\$1678.61)
25	Idaho	4.16% (\$1236.81)

Rank	State	% of Income (and \$ Amount) Spent on Gasoline by the Average Driver, 2006
26	Michigan	4.16% (\$1403.34)
27	Nevada	4.14% (\$1531.08)
28	Virginia	4.02% (\$1571.84)
29	Ohio	4.00% (\$1326.00)
30	California	4.00% (\$1545.06)
31	Delaware	3.85% (\$1490.79)
32	Vermont	3.84% (\$1303.26)
33	Hawaii	3.75% (\$1348.83)
34	New Hampshire	3.73% (\$1468.87)
35	Wisconsin	3.73% (\$1290.97)
36	Florida	3.67% (\$1311.64)
37	Oregon	3.67% (\$1221.84)
38	Illinois	3.53% (\$1347.47)
39	Nebraska	3.52% (\$1209.98)
40	Maryland	3.46% (\$1521.38)
41	Alaska	3.44% (\$1272.55)
42	Colorado	3.43% (\$1325.49)
43	Pennsylvania	3.38% (\$1231.10)
44	New Jersey	3.37% (\$1559.14)
45	Washington	3.30% (\$1218.11)
46	Kansas	3.27% (\$1131.10)
47	Rhode Island	2.85% (\$1058.79)
48	Massachusetts	2.83% (\$1293.89)
49	New York	2.51% (\$1059.72)
50	Connecticut	2.50% (\$1247.57)

Generally, the hardest-hit states are in the South and the least vulnerable are in the Northeast. While the vulnerability rankings roughly—by no means exactly—correspond to per capita income rankings, the differences are still significant. Citizens in the most vulnerable state – Mississippi – spend more than 6 percent of their income on gasoline, while citizens in the least vulnerable state – Connecticut – spend about 2.5 percent of theirs, a 60 percent difference. When oil prices go up, citizens in the vulnerable states are going to feel the pinch more. Vulnerable states on this list should take this as an added incentive to take action to reduce oil dependence.

BREAKING OUR ADDICTION: SOLUTIONS TO OIL DEPENDENCE

Identifying the problem of oil addiction is only the beginning; the next step is to implement workable solutions. By promoting more efficient vehicles, clean fuels, smart growth, and public transit, governments can put an end to an unhealthy addiction that threatens our national security, economy, and environment.

Solutions to oil dependence boast broad support that spans party lines, geographical boundaries, and policy interests (e.g., national security, energy security, economic stability, public health, and the environment). The public firmly supports efforts to reduce our nation’s oil dependence;

public opinion polling shows that 86 percent of Americans support improving fuel efficiency and about two-thirds support greater spending on transit programs as well as putting more federal dollars toward ethanol research.⁵ A recent poll from the Consumer Federation of America shows that nearly three-quarters of the public supports higher fuel economy standards even if this legislation led to higher vehicle costs.⁶

State Solutions Rankings: Who's Getting It Right?

NRDC's rankings of the states on their implementation of solutions are based on the range of key actions that states can take to reduce oil dependence and on the level of priority that states are placing on public transit as compared to highways.⁷ As Table 2 shows, some states are implementing significant measures to promote clean vehicles, clean fuels, and smart growth, but far too many states are taking inadequate action.

⁵ Pew Research Center, *Both Reds and Blues Go Green on Energy*, 2006, <http://pewresearch.org/pubs/8/both-reds-and-blues-go-green-on-energy>.

⁶ Consumer Federation of America, *Americans alarmed about the dependence on oil imports and resulting high gas prices and funding of terrorism*, 2007, http://www.consumerfed.org/pdfs/CFA_For_Immediate_Release052107.pdf.

⁷ For more details on the solutions ranking, see the Methodology section at the end of this report.

TABLE 2: SOLUTIONS RANKINGS

Rank	States	Clean Cars		Clean Fuels			Smart Growth & Transit	
		Hybrid Tax Incentives	Clean Cars Standard	Biofuels Refueling Stations Tax Credits	Low Carbon Fuel Standard	Renewable Fuel Standard	Growth Management/ Smart Growth Law ²	Transit investment prioritization (ranking and percentage) ¹
1	California		✓	✓	✓			5 (30.73%)
2	Washington		✓	✓		✓	✓	13 (10.73%)
3	New Jersey	✓	✓				✓	4 (35.67%)
4	Rhode Island	✓	✓	✓				11 (14.59%)
5	Oregon	✓	✓				✓	19 (7.89%)
6	Maine		✓	✓			✓	41 (2.31%)
7	New York		✓	✓				1 (51.70%)
8	Maryland		✓				✓	2 (46.65%)
9	Connecticut	✓	✓					8 (23.63%)
10	Massachusetts		✓					3 (45.17%)
11	Louisiana	✓		✓		✓		27 (5.34%)
12	Pennsylvania		✓					6 (26.92%)
13	Vermont		✓					29 (4.63%)
14	Hawaii					✓	✓	12 (13.97%)
15	Colorado	✓		✓				17 (8.93%)
16	Georgia	✓					✓	22 (6.47%)
17	Florida			✓			✓	24 (6.02%)
18	Oklahoma	✓		✓				31 (4.28%)
19	Iowa			✓		✓		35 (3.05%)
20	Kansas	✓		✓				44 (2.08%)
21	Montana			✓		✓		49 (1.52%)
22	Minnesota					✓		9 (17.41%)
23	Wisconsin						✓	18 (8.57%)
24	North Carolina			✓				23 (6.24%)
25	Utah	✓						25 (5.98%)

¹ Ranking based on the percentage of transit spending to highway spending in 2005.

TABLE 2: SOLUTIONS RANKINGS (cont'd)

Rank	States	Clean Cars		Clean Fuels			Smart Growth & Transit	
		Hybrid Tax Incentives	Clean Cars Standard	Biofuels Refueling Stations Tax Credits	Low Carbon Fuel Standard	RFS	Growth Management/ Smart Growth Law ²	Transit spending prioritization (ranking and percentage) ¹
26	Tennessee						✓	26 (5.81%)
27	Indiana			✓				28 (4.73%)
28	Missouri					✓		32 (3.99%)
29	Arkansas			✓				36 (2.70%)
30	South Carolina	✓						37 (2.69%)
31	New Mexico	✓						39 (2.41%)
32	North Dakota			✓				43 (2.27%)
33	Idaho			✓				45 (2.04%)
34	Illinois							7 (23.98%)
35	Alaska							10 (15.29%)
36	Michigan							14 (9.75%)
37	Delaware							15 (9.71%)
38	Virginia							16 (9.57%)
39	Arizona							20 (7.06%)
40	Nevada							21 (7.03%)
41	Ohio							30 (4.60%)
42	Texas							33 (3.97%)
43	Alabama							34 (3.56%)
44	Kentucky							38 (2.69%)
45	New Hampshire							40 (2.39%)
46	Nebraska							42 (2.30%)
47	South Dakota							46 (1.89%)
48	Mississippi							47 (1.80%)
49	West Virginia							48 (1.64%)
50	Wyoming							50 (1.41%)

¹ Ranking based on the percentage of transit spending to highway spending in 2005.

² There may be more state laws promoting growth management and/or smart growth currently in existence; however, those listed here are the most comprehensive growth-management laws.

Clean Vehicles

- **A dozen states have adopted “clean cars” legislation.** California led the way in 2002, passing a first-in-the-nation law (California Assembly Bill 1493, often referred to as the Pavley bill, after its sponsor, Fran Pavley) that required all new cars, pickup trucks, sport-utility vehicles and minivans sold in the state to meet global warming pollution limits starting with the 2009 model year. Under the federal Clean Air Act, their states have the option of adopting California’s pollution standards. Although the automakers are suing to stop the program from being implemented, Connecticut, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, Pennsylvania, Rhode Island, Vermont, and Washington have also adopted the same program. These states represent more than one-third of the U.S. car market. The ‘clean car’ laws will require automobile manufacturers to cut global warming pollution by about 30 percent once the standards are fully phased in by 2016. Cars that meet this pollution standard will have the additional benefit of using less gasoline or run on non-petroleum fuels.
- **Several states are promoting cleaner vehicles through incentives to consumers.** Ten states offer incentives for the purchase of new hybrid electric cars and trucks. (The federal government also offers tax incentives for hybrid purchases through the Energy Policy Act of 2005.) Hybrid electric vehicles emit less global warming pollution and use less gasoline than conventional vehicles. Beginning with the U.S. mass-market introduction of the two-door Honda Insight in 1999, major carmakers have increased their offerings of hybrid cars, now offering nearly 25 different models including sedans, trucks and sport-utility vehicles. A few states also provide incentives for vehicles that run exclusively on hydrogen fuel cells or electricity; while perhaps noble in purpose, these incentives currently have limited impact, since the current high cost and limited availability make these cars less popular than the current hybrid electric models.

Clean Fuels

- **California is the only state which has announced its intention to adopt a Low Carbon Fuel Standard.** Earlier this year, California Governor Arnold Schwarzenegger announced an executive order calling for the adoption of a Low-Carbon Fuel Standard (LCFS) for fuels sold in the state. This measure, which seeks to reduce the global warming pollution “intensity” of motor vehicle fuel by 10 percent by 2020, has not yet been adopted by any other U.S. state (though the European Commission has announced intentions to adopt a similar standard shortly after California’s announcement).⁸ Promoting low-carbon fuels supports the growth of oil alternatives, since sustainably produced biofuels (especially those derived with cellulosic technology) can offer tremendous greenhouse gas emission reductions as well as plug in electric vehicles. California estimates that achieving the 10 percent reduction goal will reduce motor vehicle petroleum consumption by about 20 percent.
- **Seven states have mandated a Renewable Fuels Standard (RFS).** In these states, fueling stations are required to sell a certain percentage of renewable fuels as part of their

⁸ This standard is complementary to the goals set in California’s Global Warming Solutions Act of 2006 (Assembly Bill 32). Under this act, California, the world’s 12th largest carbon emitter, will cap GHG emissions at 1990 levels by 2020, which is approximately a 25 percent reduction in emissions.

total fuels sold. These standards vary by state; for example, Washington requires gasoline to contain 2 percent ethanol by 2008 (requiring all fuel to be E2 gasoline), while Minnesota requires 20 percent of all gasoline sold to be ethanol by 2013. Even some cities, including San Francisco and Portland, have adopted fuels standards.

- **Seventeen states offer incentives for fueling stations selling biofuels.** These states offer various incentives for biofuels stations and for stations wishing to add capacity to sell renewable fuels. Because ethanol requires special storage and pumping equipment, state incentives provide important financial support for biofuels stations and thereby make renewable fuels more readily available to consumers. Unfortunately, there is a long way to go: currently, states have an average of one and a half renewable fuel stations for every 100 conventional fueling stations⁹.

Smart Growth and Public Transit

- **Ten states have smart growth policies, but only a handful of them have comprehensive growth management laws.** States can lower oil dependence through smart growth policies that reduce sprawl and promote accessible public transit systems. In order to reduce sprawl, smart growth strategies focus on planning decisions involving issues such as land use, zoning, and building codes. By concentrating growth and renewal within already existing communities, states can reduce the need to further develop outside a city where entirely new infrastructure (roads, buildings, etc.) must be built. New development in suburban and rural areas not only may create negative consequences for the environment, but also may increase the distance that ordinary citizens must travel for work and other activities.

Among the most comprehensive ways of promoting smart growth is growth management legislation, such as Washington's Growth Management Act (GMA). Amended numerous times since its adoption in 1990, Washington's GMA responded to increasing rates of growth and development viewed as threats to the environment and economy of the state and the well-being of its citizens. The GMA affects 29 counties (95 percent of Washington's population) and requires, among other things, planning policies that cover: sprawl reduction, affordable housing, open space and recreation, environmental protection, natural resource industries, permit processing, concentrated urban growth, regional transportation, historic lands and buildings, and public facilities and services. Washington is one of only a few states that have comprehensive growth management regulations. Given its apparent success at slowing sprawl, Washington's GMA may serve as a starting point for other states wishing to implement comprehensive measures for smart growth planning.¹⁰

- **Some states have prioritized the funding of public transit.** Public transit systems, such as bus, commuter rail, subway, and light rail transportation programs, are an important component in state efforts to promote smart growth and reduce oil dependence. Currently, cars (fueled primarily by oil) account for about 87 percent of transportation

⁹Energy Information Administration, *State Energy Profiles: Fueling stations*, 2007, , <http://tonto.eia.doe.gov/state/>. Department of Energy's Office of Energy Efficiency and Renewable Energy, *Alternative Fuels Data Center*, 2007, http://www.eere.energy.gov/afdc/infrastructure/station_counts.html.

¹⁰ Municipal Research and Services Center of Washington, *Comprehensive Planning/ Growth Management*, 2007, <http://www.mrsc.org/subjects/planning/compplan.aspx>.

trips every day.¹¹ By creating or expanding reliable and accessible public transit programs, states can reduce the number of single-passenger cars on the road, consequently lowering average vehicle-miles traveled (VMT). In recent years, VMT has consistently increased at a higher rate than population growth, with total VMT in the United States increasing by 7.2 percent between 2000 and 2005, while population increased by only 4.3 percent during the same period.¹²

Although it is costly to construct and maintain safe, reliable, and efficient public transit systems, states can fund such systems through a variety of sources:

- *Local and state funds for transit (taxes, etc.)* represented 34.6 percent and 19.7 percent of total transit funding in 2004, respectively.
- *Federal funds specifically for transit and those transferred (or “flexed”) from other federal surface transportation funds* made up 17.6 percent of total transit funding in 2004.
- *System-generated revenue (tickets sold, etc.)* represented 28.1 percent of total transit funding in 2004.¹³

In 2004, of \$1.475 billion of federal transportation funds available, states chose to flex \$980 million.¹⁴ Most states have the ability to flex certain federal funds that ordinarily would be spent on highway projects and instead use them to pay for public transit programs. States that choose not to transfer federal funds to transit programs are not necessarily neglecting transit funding, however. For example, Massachusetts flexed only 41 percent of its available *federal* funds for transit, but the state spends more *state* dollars per capita on transit than any other state. In contrast, Alabama and Utah transferred all of their federal funds available for transit projects, but did not provide any of their own state dollars for transit activities, resulting in transit programs receiving substantially less funding—only 25 cents and \$1.41 per capita, respectively. The best measurement for understanding state transit prioritization is to compare the amount of total state spending (including flexed federal funds) on transit and highway programs, as shown in the far right column of Table 2. By this measure, the top five states prioritizing public transit spending are New York, Maryland, Massachusetts, New Jersey and California.

CONCLUSION

Citizens of all states are dependent on oil for their transportation needs. However, some states are more vulnerable to oil price increases than others, and some states are taking significantly more action to curtail oil dependence.

¹¹ Bureau of Transportation Statistics, *National Household Travel Survey: Daily Travel Quick Facts*, 2003, http://www.bts.gov/programs/national_household_travel_survey/daily_travel.html.

¹² Bureau of Transportation Statistics, *State Transportation Statistics 2006*. Highway Vehicle-Miles Traveled (Table 5-3). http://www.bts.gov/publications/state_transportation_statistics/state_transportation_statistics_2006/html/table_05_03.html.

¹³ Federal Highway Administration, *The Role of Highways and Transit*. 2006, <http://www.fhwa.dot.gov/policy/2006cpr/pdfs/esblk.pdf>.

¹⁴ Federal Transit Administration, *2004 Statistical Summaries*. Summary of Flexible Funds Availability & Obligations (Table 51), 2005, <http://www.fta.dot.gov/documents/t-51.xls>.

Responsible states are making efforts to promote clean fuels, efficient vehicles, and smart growth and transit. As policies to reduce oil dependence take root, these states will be making the nation more secure, in addition to protecting their citizens' pocketbooks and enhancing global environmental health. These states' policies can serve as examples for the many states that have thus far taken little or no such action.

At the same time, the federal government has a responsibility to take strong and necessary actions to reduce our oil dependence, and significant progress must still be made at this level of government. Leading states' promotion of clean fuels, efficient vehicles, and smart growth and transit presents our nation's leaders with an opportunity to gauge the most effective measures and implement them. Specifically, supportive policies worthy of rapid federal enactment include:

- Higher fuel economy standards for cars and trucks
- A low-carbon fuel standard
- Increase in investments in public transportation and other alternatives to driving

Solutions to our current oil dependence are available today. We have the ability and responsibility at all levels of government, both state and federal, to reduce oil dependence and be drivers for progress toward increased energy security.

METHODOLOGY

Oil vulnerability ranking

The oil vulnerability ranking is based on data from the following sources:

Motor Gasoline Consumption:

- Energy Information Administration (available at <http://tonto.eia.doe.gov/dnav/pet/hist/mgfupus1M.htm>)

States' Portion of Total U.S. Consumption:

- Federal Highway Administration's *Highway Statistics 2005* (available at <http://www.fhwa.dot.gov/policy/ohim/hs05/xls/mf21.xls>)

Gasoline Prices by State:

- Energy Information Administration (available at http://tonto.eia.doe.gov/dnav/pet/pet_pri_allmg_a_EPM0_PTC_cpgal_m.htm)

Licensed Drivers by State:

- Federal Highway Administration's *Highway Statistics 2002-2005* (available at <http://www.fhwa.dot.gov/policy/ohim/hs05/xls/dl22.xls>)

Per Capita Personal Income by State:

- Bureau of Economic Analysis (available at http://preview.bea.gov/newsreleases/regional/spi/sqpi_newsrelease.htm)

The oil vulnerability ranking is based on the percentage of personal income on gasoline in each state in 2006. To calculate this percentage, the amount of motor gasoline consumed in each state is multiplied by average price to produce the total amount spent in each state on gasoline. This figure is then divided by the total number of licensed drivers to produce the amount spent on

gasoline per driver. Finally, this number is divided by per capita income and multiplied by 100 to produce the average percentage of citizens' income spent on gasoline.

At the time of writing, the Bureau of Economic Analysis data on "per capita personal income" was available only for the first three quarters of 2006, and an average of these three periods was used for the ranking calculation. Because 2006 data on the number of licensed drivers in each state was not yet available from the Federal Highway Administration, figures were estimated using the rates of increase from 2002-2005.

Solutions Ranking

The solutions ranking was based on data from the following sources:

Hybrid Tax Incentives, Biofuels Refueling Station Incentives, and RFS:

- "Alternative Fuels Data Center" of the Department of Energy's Office of Energy Efficiency and Renewable Energy (available at <http://www.eere.energy.gov/afdc/>).

Clean Cars Standard:

- Pew Center on Global Climate Change (available at http://www.pewclimate.org/what_s_being_done/in_the_states/)
- California Clean Cars (available at <http://www.calcleancars.org/canada.html>)
- Clean Cars Campaign (available at <http://www.cleancarscampaign.org>)

Low-Carbon Fuel Standard:

- Pew Center on Global Climate Change (available at http://www.pewclimate.org/what_s_being_done/in_the_states/)

Smart Growth/ Growth Management Laws:

- American Planning Association (available at <http://www.planning.org>)
- State government websites

State Transit Prioritization:

- Federal Highway Administration's *Highway Statistics 2005* (available at <http://www.fhwa.dot.gov/policy/ohim/hs05/>)

In order to calculate a solutions ranking of the 50 states, NRDC started by assigning one point to each action in the table that a state currently takes (i.e., one point for each check mark) on hybrid vehicle incentives, renewable fuels stations, renewable fuels standards and smart growth/growth management acts. States that have passed a Low-Carbon Fuel Standard or Clean Cars legislation will receive 2.5 points for each check mark. The Low-Carbon Fuel Standard and Clean Cars legislation are given extra value because they have greater potential to reduce oil demand. For example, NRDC estimates that while a 10 percent RFS would save about 6 percent oil, the Clean Cars act would save 18 to 20 percent in 2020 and a Low Carbon Fuel Standard would save about 20 percent in 2020.

NRDC then added a fraction of a point to states' scores based on how their transit prioritization compared to the highest state's transit percentage (New York: 51.7%). In other words, New York's transit prioritization of 51.7% was given a value of 1 point, and all other states were given a value proportional to this. (For example, Washington's transit percentage of 10.73 was divided by New York's 51.7; the resulting 0.21, when added to Washington's 5.5 points, yields a total score of 5.71, which was the second highest score of any state.)